

WHAT IS CLAIMED IS:

1. An introducer sheath, comprising:

an inner tube having a passageway extending longitudinally  
therethrough, said passageway having a substantially uniform diameter of from 14  
5 to 36 French;

a coil having a plurality of coil turns extending longitudinally around  
said inner tube, and a plurality of predetermined spacings between said turns; and

an outer tube positioned longitudinally around said coil and said inner  
tube connected to inner tube through the spacings between said turns.

2. The introducer sheath of claim 1, wherein said spacings between said coil turns  
have a uniform width.

3. The introducer sheath of claim 2, wherein the uniform diameter of said  
15 passageway ranges from 16 through 30 French.

4. The introducer sheath of claim 3, wherein said uniform diameter of said  
passageway ranges from 20 to 26 French.

5. The introducer sheath of claim 4, wherein said uniform diameter of said  
20 passageway comprises one of 22 French and 24 French.

6. The introducer sheath of claim 2, further comprising a side port positioned at a  
distal end of said reinforcement or coil.

7. The introducer sheath of claim 2, wherein said outer tube has a durometer  
25 having a range from 20 to 85 on the Shore D hardness scale.

8. The introducer sheath of claim 7, wherein said outer tube comprises polyamide  
30 having a durometer of about 30 to 60.

9. The introducer sheath of claim 8, wherein said polyamide comprises nylon having a durometer of about 40.

10. The introducer sheath of claim 2, further comprising a polymeric radiographic marker tube disposed adjacent a distal end of said coil.

11. The introducer sheath of claim 10, wherein said radiographic marker tube comprises polyamide and is disposed along said sheath between said inner tube and said outer tube, said marker tube comprising a high density radiopaque material ranging between about 40 and 90 weight percent of the total weight of the marker tube.

12. The introducer sheath of claim 11, wherein said radiopaque material comprises about 80 weight percent of said total weight.

13. The introducer sheath of claim 11, wherein said marker tube comprises nylon, and said radiopaque material comprises tungsten.

14. The introducer sheath of claim 2, wherein said inner tube comprises PTFE, said coil comprises stainless steel flat wire, and said outer tube comprises nylon, said outer tube having a durometer between about 35 and 50.

15. The introducer sheath of claim 14, wherein said durometer is about 40.

16. The introducer sheath of claim 2, wherein said uniform width of said spacings is between about 0.004 and 0.08 inch (0.1 and 2 mm).

17. The introducer sheath of claim 16, wherein said uniform width is about 0.012 inch (0.03 mm), and each coil turn of said coil has a width between about 0.005 and 0.030 inch (0.13 and 0.76 mm).

18. The introducer sheath of claim 16, wherein a proximal end of said coil is spaced from a proximal end of said sheath by about 0.5 to 5.0 inches (1.27 and 12.7 cm), and a distal end of said coil is spaced from a distal end of said sheath by about 0.1 and 2 inches (0.25 and 5.1 cm).

5

19. The introducer sheath of claim 18, wherein said proximal end of said coil is spaced from said proximal end of said sheath by about 1.2 inches (3.1 cm), and said distal end of said coil is spaced from said distal end of said sheath by about 0.8 inch (2 cm).

10

20. The introducer sheath of claim 11, wherein said radiographic marker tube is bonded to said outer tube by a thermal bond.

15

21. The introducer sheath of claim 20, further comprising a side port extending radially through said inner tube, said marker tube and said outer tube.

22. A method of manufacturing an introducer sheath, comprising the steps of:

positioning an inner tube over a mandril, said inner tube having a substantially uniform diameter of from about 14 to 36 French;

20

positioning a coil over said inner tube, said coil having a plurality of turns, said turns having substantially uniform spacings therebetween;

positioning a polymeric radiopaque marker tube over said inner tube adjacent a distal end of said coil;

25

positioning a polymeric outer tube over said inner tube, coil and marker tube to comprise a sheath assembly;

positioning a heat shrink tube over the sheath assembly;

heating said heat shrink tube and said sheath assembly so that a portion of said outer tube melts and flows between said coil turns to bond with said inner tube, and so that marker tube is bonded to said outer tube; and

30

removing said mandril and said heat shrink tube from said sheath.

23. The method of claim 22, further comprising the step of providing a side port through said sheath.

24. The method of claim 22, wherein said outer tube and said marker tube are formed from polyamide.

25. The method of claim 24, wherein said marker tube includes a loading of about 80 wt. percent of a radiopaque material.

26. The method of claim 24, wherein a distal end of said sheath is tapered.

27. The method of claim 22, wherein said coil is compression fitted around said inner tube.

28. The method of claim 22, wherein said outer tube comprises polyamide and has a durometer of about 30 to 60.